

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: BRANDT ET AL.)
Appl. No. 10/074,970) Examiner L. West
Confirm. No. 6905) Art Unit 2682
Filed: 13 February 2002) Atty. Docket No. CS20456RL

Title: "Reselection Optimization in Mobile Wireless
Communication Devices And Methods Therefor"

3rd SUPPLEMENTAL APPEAL BRIEF
UNDER 37 C.F.R. § 41.37(c)

Assistant Commissioner for Patents
Alexandria, Virginia 22313

Sir:

Real Party In Interest

The real party in interest is Motorola Inc., by virtue of an assignment duly executed by the named inventor(s) and recorded in the Patent Office on 28 March 2002, REEL/FRAME 012741/0374.

Related Appeals & Interferences

There are no related appeals or interferences.

Status of Claims

Claims 1-20 stand finally rejected under 35 USC 102(e) for anticipation by U.S. Patent No. 6,278,703 (New) in a final Office Action mailed on 4 February 2005.

Status of Amendments

No amendments have been filed subsequent to the mailing of the final Office Action on 4 February 2005.

Summary of Claimed Subject Matter

Claim 1 is drawn to a method in a mobile wireless communication device including performing present signal measurements while receiving present paging information, and performing present reselection processing on prior signal measurements while performing present signal measurements. Page 3, line 23 – page 5, line 6; page 7, lines 6 – 20. FIGs. 2 & 3.

Claim 2 is drawn to performing prior signal measurements while receiving prior paging information before receiving the present paging information. Page 6, line 20 – page 7, line 5. Claim 3 is drawn to reducing power consumption by performing the present reselection processing on the prior signal measurements while receiving the present paging information, performing prior signal measurements while receiving prior paging information before receiving the present paging information. Page 5, line 12 – page 7, line 5. Claim 4 is drawn to reducing power consumption by

performing the present reselection processing, based upon the prior signal measurements, and receiving the present paging information in a substantially overlapping time period. Page 5, line 12 – page 7, line 5. Claim 19 is drawn to reducing power consumption by operating in a minimal power consumption mode when not receiving periodic paging indicator blocks and when not performing periodic signal measurements and not performing reselection processing. Page 5, line 12 – page 7, line 5. Claim 20 is drawn to performing signal measurements between receiving periodic paging indicator blocks when the period between the periodic paging indicator blocks is greater than a predetermined period. Page 5, line 12 – page 7, line 5.

Claim 8 is drawn to a method in a mobile wireless communication device that receives paging information and performs neighbor signal measurements including performing present signal measurements while receiving the present paging information, performing reselection processing while receiving present paging information, reducing power consumption by performing the reselection processing on prior signal measurements performed while receiving prior paging information. Page 3, line 23 – page 7, line 20. FIGs. 2, 3 & 4. Claim 11 is drawn to receiving present paging information, performing present signal measurements, and performing reselection processing while operating the wireless communication device in idle mode. Page 5, line 12 – page 7, line 5.

Claim 12 is drawn to a method in a wireless communication device, comprising receiving periodic paging information, performing periodic signal measurements, performing periodic reselection processing, reducing power consumption by receiving at least a portion of the periodic paging information concurrently with performing at least a portion of the

periodic signal measurements and performing at least a portion of the periodic reselection processing. Page 3, line 23 – page 7, line 20. FIGs. 2, 3 & 4. These and other aspects of the invention are discussed more fully page 1, line 16 – page 8, line 19 of the instant specification and are illustrated in the FIGS. 1-4. Claim 13 is drawn to performing present reselection processing on prior signal measurements while performing present signal measurements. Page 5, line 12 – page 7, line 5.

Claim 15 is drawn to a method in a TDMA communication device including performing present signal measurements while receiving present paging information, and performing present reselection processing on prior signal measurements while performing present signal measurements. Page 3, line 23 – page 5, line 6; page 7, lines 6 – 20. FIGs. 2 & 3.

Claim 18 is drawn to a method in a WCDMA communication device including performing present signal measurements while receiving present paging information, and performing present reselection processing on prior signal measurements while performing present signal measurements. Page 3, line 23 – page 5, line 6; page 7, lines 6 – 20. FIGs. 2 & 3.

Grounds of Rejection for Review on Appeal

The issue is whether Claims 1-20 are anticipated by U.S. Patent No. 6,278,703 (New) under 35 USC 102(e).

Arguments

Rejection Summary

Claims 1-20 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,278,703 (New). Office Action, 18 June 2004.

Summary of New

New discloses performing idle mode reacquisition and handoff in wireless communication systems having base stations that are not synchronized, wherein the remote terminal is assigned paging times that differ from base station to base station. New, col. 3, line 15 – col. 4, line 11. At col. 9, line 50 - col. 10, line 22, referenced by the Examiner to support the rejection of claims, New discloses the processing of multiple base stations in an asynchronous system. In FIG. 4, at interval 416, a remote terminal in the active state adds base station (2) to the reacquisition search list based on a calculation of its reselection timer. At interval 422, the terminal is inactive. At time period T_{CR1} in interval 426, the terminal wakes up and performs base station reacquisition using an acquisition search list. At a later time period T_1 in interval 426 new demodulates the paging channel for the preferred base station determined previously. Thereafter, the terminal performs a priority search for new neighboring base stations. At col. 5, lines 53-65, New discusses inactivating the terminal during times other than those corresponding to the paging channel time slot to which the terminal is assigned.

Patentability of Claim 1

Regarding Claim 1, contrary to the Examiner's assertion, New does not disclose or suggest a

... method in a mobile wireless communication device, comprising:
receiving present paging information;
performing present signal measurements while receiving the present paging information;
performing present reselection processing on prior signal measurements while performing present signal measurements.

Contrary to the Examiner's assertion, there is no indication that New receives present paging information while performing present signal measurements. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. There is no indication that New performs present reselection processing on prior signal measurements while performing present signal measurements. New merely discloses performing reacquisition of the base stations on the reacquisition search list before updating the search list. New, col. 10, lines 2-5. Claim 1 is thus patentably distinguished over New.

Patentability of Claim 2

Regarding Claim 2, New does not disclose or suggest, in combination with the limitations of Claim 1

... performing the prior signal measurements while receiving prior paging information before receiving the present paging information.

New does not discuss performing signal measurements while receiving paging information. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 2 is thus further patentably distinguished over New.

Patentability of Claim 3

Regarding Claim 3, New does not disclose or suggest in combination with the limitations of Claim 1 and any intervening claims.

... reducing power consumption by performing the present reselection processing on the prior signal measurements while receiving the present paging information, performing the prior signal measurements while receiving prior paging information before receiving the present paging information.

New cannot reduce power as claimed because New does not disclose reacquiring while receiving present paging information. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 3 is thus further patentably distinguished over New.

Patentability of Claim 4

Regarding Claim 4, New does not disclose or suggest, in combination with the limitations of Claim 1

... reducing power consumption by performing the present reselection processing, based upon the prior signal measurements, and receiving the present paging information in a substantially overlapping time period.

Contrary to the Examiner's assertion, New does not reduce power consumption as claimed since New does not perform reselection processing and receiving paging information during an overlapping time period. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 4 is thus further patentably distinguished over New.

Patentability of Claim 5

Regarding Claim 5, contrary to the Examiner's assertion, New does not disclose or suggest in combination with the limitations of Claim 1,

... entering a minimal power consumption mode while not receiving paging information and not performing signal measurements and not performing reselection processing.

Claim 5 is thus further patentably distinguished over New.

Patentability of Claim 6

Regarding Claim 6, New does not disclose or suggest, in combination with the limitations of Claim 1,

... maximizing minimal power consumption mode operation by performing the reselection processing while substantially concurrently receiving the paging information.

Contrary to the Examiner's assertion, New does not perform reselection processing and receive paging information concurrently. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 6 is thus further patentably distinguished over New.

Patentability of Claim 7

Regarding Claim 7, New does not disclose or suggest, in combination with the limitations of Claim 1,

... receiving present paging information, performing present signal measurements, and performing reselection processing while operating the wireless communication device in idle mode.

Contrary to the Examiner's assertion, New performs signal measurements and receives paging information during active states (at blocks 416 and 426 in FIG. 4.). Claim 7 is thus further patentably distinguished over New.

Patentability of Claim 8

Regarding independent Claim 8, contrary to the Examiner's assertion, New does not disclose or suggest a

... method in a mobile wireless communication device that receives paging information and performs neighbor signal measurements, comprising:

- receiving present paging information;
- performing present signal measurements while receiving the present paging information;
- performing reselection processing while receiving present paging information;
- reducing power consumption by performing the reselection processing on prior signal measurements performed while receiving prior paging information.

There is no indication that New receives present paging information while performing present signal measurements. Also, there is no indication that New performs present signal measurements during reacquisition, at interval (426). New does not reduce power consumption as claimed since New does not perform reselection processing while receiving paging information. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 8 and the claims that depend therefrom are thus patentably distinguished over New.

Patentability of Claim 9

Regarding Claim 9, contrary to the Examiner's assertion, New does not disclose or suggest, in combination with the limitations of Claim 8,

... entering a minimal power consumption mode when not receiving paging information and not performing signal measurements and not performing reselection processing.

Claim 9 is thus further patentably distinguished over New.

Patentability of Claim 10

Regarding Claim 10, contrary to the Examiner’s assertion, New does not disclose, in combination with the limitations of Claim 8,

... maximizing minimal power consumption mode operation by performing the reselection processing while substantially concurrently receiving the paging information.

Contrary to the Examiner’s assertion, New does not perform reselection processing and receive paging information substantially concurrently. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 10 is thus further patentably distinguished over New.

Patentability of Claim 11

Regarding Claim 11, New does not disclose or suggest, in combination with the limitations of Claim 8,

... receiving present paging information, performing present signal measurements, and performing reselection processing while operating the wireless communication device in idle mode.

Contrary to the Examiner’s assertion, New performs signal measurements and receives paging information during active states (at blocks 416 and 426 in FIG. 4.). Claim 11 is thus further patentably distinguished over New.

Patentability of Claim 12

Regarding independent Claim 12, contrary to the Examiner's assertion, New does not disclose or suggest a

... method in a wireless communication device, comprising:
receiving periodic paging information;
performing periodic signal measurements;
performing periodic reselection processing;
reducing power consumption by receiving at least a portion of
the periodic paging information concurrently with performing at least a
portion of the periodic signal measurements and performing at least a
portion of the periodic reselection processing.

There is no indication that New receives periodic paging information while concurrently performing periodic signal measurements, i.e., while evaluating base station (2) as a handoff candidate during active state (416). New performs reacquisition before the paging information is demodulated. Particularly, New discloses demodulating the paging channel at time period T₁, which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Therefore New does not suggest reducing power consumption as claimed. Claim 12 is thus patentably distinguished over New.

Patentability of Claim 13

Regarding Claim 13, New does not disclose or suggest, in combination with the limitations of Claim 12,

... performing present reselection processing on prior signal measurements while performing present signal measurements.

Contrary to the Examiner's assertion, New does not perform reselection processing on prior signal measurements while performing time present signal measurements. New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 13 is thus further patentably distinguished over New.

Patentability of Claim 14

Regarding Claim 14, contrary to the Examiner's assertion, New does not disclose or suggest, in combination with the limitations of Claim 12,

... operating in a minimal power consumption mode when not receiving periodic paging information and not performing periodic signal measurements and not performing periodic reselection processing.

Claim 14 is thus further patentably distinguished over New.

Patentability of Claim 15

Regarding independent Claim 15, New does not disclose or suggest a

... method in a TDMA wireless communication device that receives periodic paging blocks and performs periodic neighbor signal measurements, comprising:

receiving a present paging block;

performing present neighbor cell signal strength measurements while receiving the present paging block;

performing reselection processing for prior neighbor cell signal strength measurements while receiving the present paging block and performing the present neighbor cell signal strength measurements.

Contrary to the Examiner's assertion, there is no indication that New receives a present paging block while performing present neighbor signal measurements, i.e., while evaluating base station (2) as a handoff candidate during active state (416). New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. New demodulates the paging channel after reacquisition. Claim 15 and the claims that depend therefrom are thus patentably distinguished over New.

Patentability of Claim 16

Regarding Claim 16, contrary to the Examiner's assertion, New does not disclose, in combination with the limitations of Claim 15,

... reducing power consumption by operating in a minimal power consumption mode when not receiving periodic paging blocks and not performing periodic neighbor cell signal strength measurements and not performing reselection processing.

Claim 16 is thus further patentably distinguished over New.

Patentability of Claim 17

Regarding Claim 17, contrary to the Examiner's assertion, New does not disclose

... reducing power consumption by receiving at least a portion of the periodic paging blocks, performing at least a portion of the periodic neighbor cell signal strength measurements, and performing at least a portion of the reselection processing concurrently.

Contrary to the Examiner's assertion, New does not perform reselection processing and receive paging information substantially concurrently. New performs reacquisition before the paging information is demodulated. See New at col. 9: 66 - col. 10: 9. Claim 17 is thus further patentably distinguished over New.

Patentability of Claim 18

Regarding Claim 18, New does not disclose or suggest a

... method in a WCDMA wireless communication device that receives periodic paging indicator channel blocks and performs periodic reselection processing, comprising:

receiving a present paging indicator channel block;
performing present signal measurements while receiving the present paging indicator channel block;
performing reselection processing for prior signal measurements while receiving the present paging indicator channel block and performing the present signal measurements.

Contrary to the Examiner's assertion, there is no indication that New receives a present paging indicator channel block while performing

present neighbor signal measurements, i.e., while evaluating base station (2) as a handoff candidate during active state (416). There is also no indication that New performs present signal measurements during reacquisition in block (426). New demodulates the paging channel after reacquisition. Particularly, New discloses demodulating the paging channel at time period T_1 , which occurs after the reacquisition time period T_{CR1} in FIG. 4. New, col. 10, lines 2-9. Claim 18 is thus patentably distinguished over New.

Patentability of Claim 19

Regarding Claim 19, contrary to the Examiner's assertion, New does not disclose, in combination with the limitations of Claim 19,

... reducing power consumption by operating in a minimal power consumption mode when not receiving periodic paging indicator blocks and when not performing periodic signal measurements and not performing reselection processing.

Claim 19 is thus further patentably distinguished over New.

Patentability of Claim 20

Regarding Claim 20, contrary to the Examiner's assertion, New does not disclose, in combination with the limitations of Claim 15,

... performing signal measurements between receiving periodic paging indicator blocks when the period between the periodic paging indicator blocks is greater than a predetermined period.

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Claim 20 is thus further patentably distinguished over New.

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Prayer for Relief

Kindly reverse and vacate the rejections of claims, in view of the discussion above, with instructions for the Examiner to allow said Claims to issue in a United States Patent without further delay and provide other relief warranted.

Respectfully submitted,

/R K BOWLER/

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CLAIMS APPENDIX

1. (Original) A method in a mobile wireless communication device, comprising:

receiving present paging information;

performing present signal measurements while receiving the present paging information;

performing present reselection processing on prior signal measurements while performing present signal measurements.

2. (Previously Presented) The method of Claim 1, performing prior signal measurements while receiving prior paging information before receiving the present paging information.

3. (Previously Presented) The method of Claim 1, reducing power consumption by performing the present reselection processing on the prior signal measurements while receiving the present paging information, performing prior signal measurements while receiving prior paging information before receiving the present paging information.

4. (Original) The method of Claim 1, reducing power consumption by performing the present reselection processing, based upon the prior signal measurements, and receiving the present paging information in a substantially overlapping time period.

5. (Original) The method of Claim 1, entering a minimal power consumption mode while not receiving paging information and not performing signal measurements and not performing reselection processing.

6. (Original) The method of Claim 5, maximizing minimal power consumption mode operation by performing the reselection processing while substantially concurrently receiving the paging information.

7. (Original) The method of Claim 1, receiving present paging information, performing present signal measurements, and performing reselection processing while operating the wireless communication device in idle mode.

8. (Original) A method in a mobile wireless communication device that receives paging information and performs neighbor signal measurements, comprising:

receiving present paging information;

performing present signal measurements while receiving the present paging information;

performing reselection processing while receiving present paging information;

reducing power consumption by performing the reselection processing on prior signal measurements performed while receiving prior paging information.

9. (Original) The method of Claim 8, entering a minimal power consumption mode when not receiving paging information and not performing signal measurements and not performing reselection processing.

10. (Original) The method of Claim 8, maximizing minimal power consumption mode operation by performing the reselection processing while substantially concurrently receiving the paging information.

11. (Original) The method of Claim 8, receiving present paging information, performing present signal measurements, and performing reselection processing while operating the wireless communication device in idle mode.

12. (Original) A method in a wireless communication device, comprising:

receiving periodic paging information;
performing periodic signal measurements;
performing periodic reselection processing;
reducing power consumption by receiving at least a portion of the periodic paging information concurrently with performing at least a portion of the periodic signal measurements and performing at least a portion of the periodic reselection processing.

13. (Original) The method of Claim 12, performing present reselection processing on prior signal measurements while performing present signal measurements.

14. (Original) The method of Claim 12, operating in a minimal power consumption mode when not receiving periodic paging information and not performing periodic signal measurements and not performing periodic reselection processing.

15. (Original) A method in a TDMA wireless communication device that receives periodic paging blocks and performs periodic neighbor signal measurements, comprising:

receiving a present paging block;

performing present neighbor cell signal strength measurements while receiving the present paging block;

performing reselection processing for prior neighbor cell signal strength measurements while receiving the present paging block and performing the present neighbor cell signal strength measurements.

16. (Original) The method of Claim 15, reducing power consumption by operating in a minimal power consumption mode when not receiving periodic paging blocks and not performing periodic neighbor cell signal strength measurements and not performing reselection processing.

17. (Original) The method of Claim 15, reducing power consumption by receiving at least a portion of the periodic paging blocks, performing at least a portion of the periodic neighbor cell signal strength measurements, and performing at least a portion of the reselection processing concurrently.

18. (Original) A method in a WCDMA wireless communication device that receives periodic paging indicator channel blocks and performs periodic reselection processing, comprising:

receiving a present paging indicator channel block;

performing present signal measurements while receiving the present paging indicator channel block;

performing reselection processing for prior signal measurements while receiving the present paging indicator channel block and performing the present signal measurements.

19. (Original) The method of Claim 18, reducing power consumption by operating in a minimal power consumption mode when not receiving periodic paging indicator blocks and when not performing periodic signal measurements and not performing reselection processing.

20. (Original) The method of Claim 18, performing signal measurements between receiving periodic paging indicator blocks when the period between the periodic paging indicator blocks is greater than a predetermined period.

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EVIDENCE APPENDIX

(None)

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RELATED PROCEEDINGS APPENDIX

(None)